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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,050	11/16/2001	Bong-Hoe Kim	HI-0055	7845

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EXAMINER

DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/988,050	Applicant(s) KIM ET AL.	
	Examiner Raymond S Dean	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31 - 53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31 - 53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Examiner acknowledges the amendment to Figures 1 and 2 of the drawing thus the objection to the drawings is withdrawn.

2. Applicant's arguments filed February 10, 2005 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with Applicants assertion on Page 17 2nd Paragraph of the Remarks "There is no discussion in Toskala et al. about controlling ...". The DSCH is associated with the DPCH, which comprises the DPCCH. The transmit power of the DSCH may be controlled based on the power control loop maintained for said DPCH thus when there is a power adjustment of the DPCH there will be a corresponding power adjustment of said DSCH. This means that there also will be corresponding power adjustments of the TFCI of the DPCCH and the TFCI of the DSCH. Toskala therefore inherently teaches controlling the transmission of the TFCI for the DSCH. Examiner respectfully disagrees with Applicants assertion on Page 17 2nd Paragraph of the Remarks "Further, it is respectfully noted Toskala et al. does not teach or suggest ...". (See Remarks set forth above and Column 10 lines 18 – 42, the base stations that transmit the DPCH also transmit the associated DSCH).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 31 and 33 – 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Toskala et al. (US 6,650,905).

Regarding Claim 31, Toskala teaches a method for controlling a transmission power of a transport format combination indicator (TFCI) for a downlink shared channel (DSCH), in a mobile station communicating with at least one base station through a dedicated channel (DCH) comprising: selecting at least one base station transmitting the TFCI for the DSCH (Column 9 lines 61 – 67, Column 10 lines 18 – 29, the base stations that transmit the DPCH also transmit the associated DSCH); determining whether a primary base station exists among the at least one selected base station (Column 10 lines 18 – 29); and controlling the transmission power of the TFCI using a power offset based on determining whether the primary base station exists among the selected at least one base station (Column 10 lines 18 – 42, the DSCH is associated with the DPCH, which comprises the DPCH, the transmit power of the DSCH may be controlled based on the power control loop maintained for said DPCH thus when there

is a power adjustment of the DPCH there will be a corresponding power adjustment of said DSCH, this means that there also will be corresponding power adjustments of the TFCI of the DPCCH and the TFCI of the DSCH).

Regarding Claim 33, Toskala teaches all of the claimed limitations recited in Claim 31. Toskala further teaches wherein the DCH includes a dedicated physical data channel (DPDCH) and a dedicated physical control channel (DPCCH) (Column 10 lines 43 – 47).

Regarding Claim 34, Toskala teaches all of the claimed limitations recited in Claim 33. Toskala further teaches wherein the TFCI is received through the DPCCH (Column 10 lines 38 – 42).

Regarding Claim 35, Toskala teaches all of the claimed limitations recited in Claim 31. Toskala further teaches wherein the primary base station is determined using a site selection diversity transmit (SSDT) operation (Column 10 lines 18 – 29).

Regarding Claim 36, Toskala teaches all of the claimed limitations recited in Claim 31. Toskala further teaches wherein when the base station transmitting the TFCI is the primary base station, the power offset is greater than when the base station transmitting the TFCI is a non-primary base station (Column 10 lines 18 – 29, when the a primary base station is selected the transmit power level will be increased to compensate for power not transmitted by the non-primary base stations thus the power offset will be greater than when said primary base station becomes a non-primary base station).

Regarding Claim 37, Toskala teaches all of the claimed limitations recited in Claim 31. Toskala further teaches wherein the power offset is determined based on a number of radio links connected to the mobile station and a number of radio links transmitting the TFCI (Column 10 lines 18 – 42).

Regarding Claim 38, Toskala teaches a method for controlling a transmission power of a transport format combination indicator (TFCI) for a downlink shared channel (DSCH) in a mobile station communicating with at least one base station through a dedicated channel (DCH), comprising: measuring a first signal to interference ratio (SIR) using pilot signals in a dedicated physical control channel (DPCCH) (Column 10 lines 30 – 48, the typical power control loops measure signal metrics such as SIRs of pilot signals); measuring a second SIR using TFCI signals in the DPCCH (Column 10 lines 30 – 48, the typical power control loops measure signal metrics such as SIRs of TFCI signals); and independently controlling a transmission power of the DCH and the TFCI for the DSCH based on the measured first and second SIRs (Column 10 lines 18 – 42, the DSCH is associated with the DPCH, which comprises the DPCCH, the transmit power of the DSCH may be controlled based on the power control loop maintained for said DPCH thus when there is a power adjustment of the DPCH there will be a corresponding power adjustment of said DSCH, this means that there also will be corresponding power adjustments of the TFCI of the DPCCH and the TFCI of the DSCH).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toskala et al. (US 6,650,905) in view of Van Lieshout et al. (US 2001/0036823).

Regarding Claim 32, Toskala teaches all of the claimed limitations recited in Claim 31. Toskala does not teach wherein the TFCI for the DSCH is described by a code word, which is different from a code word of a TFCI for the DCH.

Van Lieshout teaches wherein the TFCI for the DSCH is described by a code word, which is different from a code word of a TFCI for the DCH (Section 0031 lines 1 – 4, the TFCI1 and TFCI2 will comprise bits, said bits make up the code words).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the code words taught in Van Lieshout in the system of Toskala for the purpose of indicating to the mobile station the spreading codes, channel coding, and coding rate that will be used thereby enabling the mobile station to be configured such that said mobile station can communicate properly as taught by Van Lieshout.

7. Claims 39 – 43 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Lieshout et al. (US 2001/0036823) in view of Toskala et al. (US 6,650,905).

Regarding Claim 39, Van Lieshout teaches a method of transmitting power control information for a transport format indicator (TFCI) for a downlink shared channel (DSCH) in a second radio network controller (RNC), when a mobile station performs handover from an area of a first RNC to an area of the second RNC, comprising: receiving from the first RNC, a control frame (Figure 1, Section 0018, Section 0020 lines 1 – 8) and transmitting to at least one base station in the second RNC, a control frame (Figure 1, Section 0018, Section 0020 lines 1 – 8).

Van Lieshout does not teach a control frame including a parameter for controlling a transmission power for the TFCI for the DSCH.

Toskala teaches a control frame including a parameter for controlling a transmission power for the TFCI for the DSCH (Column 10 lines 18 – 42, the DSCH is associated with the DPCH, which comprises the DPCCH, the transmit power of the DSCH may be controlled based on the power control loop maintained for said DPCH thus when there is a power adjustment of the DPCH there will be a corresponding power adjustment of said DSCH, this means that there also will be corresponding power adjustments of the TFCI of the DPCCH and the TFCI of the DSCH, the parameter is the power offset or power adjustment).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the power control parameter of Van Lieshout in the control

frame of Toskala for the purpose of enabling the mobile station to determine the channel resources to be used and how said resources are to be used thereby enabling said mobile station to properly communicate as taught by Toskala.

Regarding Claim 40, Van Lieshout in view of Toskala teaches all of the claimed limitations recited in Claim 39. Van Lieshout further teaches wherein the TFCI for the DSCH is coded by a code word, which is different from a code word of a TFCI for the dedicated channel DCH (Section 0031 lines 1 – 4, the TFCI1 and TFCI2 will comprise bits, said bits make up the code words).

Regarding Claim 41, Van Lieshout in view of Toskala teaches all of the claimed limitations recited in Claim 39. Toskala further teaches wherein the handover is a soft-handover for a dedicated channel (DCH), and a hard-handover for the DSCH (Column 3 lines 10 – 14, Column 10 lines 18 – 22).

Regarding Claim 42, Van Lieshout in view of Toskala teaches all of the claimed limitations recited in Claim 39. Van Lieshout further teaches wherein the control frame is transmitted using a protocol on the user plane (Figure 1, Section 0020 lines 1 – 8, the Iub and Iur interfaces comprise both a control plane and a user plane).

Regarding Claim 43, Van Lieshout in view of Toskala teaches all of the claimed limitations recited in Claim 42. Toskala further teaches wherein the parameter is a power offset value for controlling the transmission of the power control value (Column 10 lines 18 – 42).

Regarding Claim 49, Van Lieshout in view of Toskala teaches all of the claimed limitations recited in Claim 39. Van Lieshout further teaches a dedicated control frame (Figure 1, Section 0020 lines 1 – 8).

8. Claims 44 – 48 and 50 – 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Lieshout et al. (US 2001/0036823) in view of Toskala et al. (US 6,650,905) as applied to Claims 39, 43 above, and further in view of TSG – RAN Working Group (TSG – RAN Working Group 3 Meeting #11, Radio Interface Parameter Updates).

Regarding Claim 44, Van Lieshout in view of Toskala teaches all of the claimed limitations recited in Claim 43. Van Lieshout in view of Toskala does not teach a Radio Interface Parameter Update message in a control frame.

TSG – RAN teaches a Radio Interface Parameter Update message in a control frame (Figure 22, Section 6.3.3.9.1).

Toskala in view of Van Lieshout and TSG – RAN Working Group teach a UMTS system thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the RADIO INTERFACE PARAMETER UPDATE message taught by TSG – RAN Working Group in the UMTS system of Toskala in view of Van Lieshout for the purpose of indicating which information is present in a control frame such as a TPC Power Offset value thus alerting the base station such that said base station applies said power offset as soon possible as taught by TSG – RAN Working Group.

Regarding Claim 45, Van Lieshout in view of Toskala and further in view of TSG – RAN teaches all of the claimed limitations recited in Claim 44. Toskala further teaches a first power offset value and a second power offset value (Column 10 lines 18 – 29, when the a primary base station is selected the transmit power level will be increased to compensate for power not transmitted by the non-primary base stations, said increase occurs due to a power offset, which is the second power offset, when said primary base station becomes a non-primary base station the power is significantly reduced said reduction is caused by a power offset, which is the first power offset) and wherein the first power offset value is used when a base station transmitting the TFCI is a non-primary base station in the DCH handover, and the second power offset value is used when a base station transmitting the DSCH among base stations transmitting the TFCI is a primary base station in the DCH handover (Column 10 lines 18 – 29, when the a primary base station is selected the transmit power level will be increased to compensate for power not transmitted by the non-primary base stations, said increase occurs due to a power offset, which is the second power offset, when said primary base station becomes a non-primary base station the power is significantly reduced said reduction is caused by a power offset, which is the first power offset).

Regarding Claim 46, Van Lieshout in view of Toskala and further in view of TSG – RAN teaches all of the claimed limitations recited in Claim 45. TSG – RAN further teaches wherein the Radio Interface Parameter Update message comprises 6 octets, and wherein the firs power offset value comprises a 5th octet with 7 bits length (Figure 22, Sections 6.3.3.9.1 - 6.3.3.9.3).

Regarding Claim 47, Van Lieshout in view of Toskala and further in view of TSG – RAN teaches all of the claimed limitations recited in Claim 46. TSG – RAN further teaches wherein the second power-offset value comprises a 6th octet with 7 bits length (Figure 22, Sections 6.3.3.9.1 - 6.3.3.9.3).

Regarding Claim 48, Van Lieshout in view of Toskala and further in view of TSG – RAN teaches all of the claimed limitations recited in Claim 47. TSG – RAN further teaches wherein the Radio Interface Parameter Update Message includes a Radio Interface Parameter Update Flags field comprising a 1st octet and 2nd octet, and wherein a third bit of the Radio Interface Parameter Update Flags field indicates whether a valid first power offset value is included and a fourth bit indicates whether a valid second power offset value is included (Figure 22, Sections 6.3.3.9.1 - 6.3.3.9.3).

Regarding Claim 50, Van Lieshout in view of Toskala teaches all of the claimed limitations recited in Claim 39. Van Lieshout in view of Toskala does not teach receiving, from the first RNC, an indicator indicating whether the parameter is included; and transmitting to the selected at least one base station, the indicator indicating whether the parameter is included.

TSG – RAN teaches an indicator indicating whether the parameter is included (Section 6.3.3.9.2).

Toskala in view of Van Lieshout and TSG – RAN Working Group teach a UMTS system thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the RADIO INTERFACE PARAMETER UPDATE flags taught by TSG – RAN Working Group in the UMTS system of Toskala in view of Van

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Lieshout for the purpose of indicating which information is present in a control frame such as a TPC Power Offset value thus alerting the base station such that said base station applies said power offset as soon possible as taught by TSG – RAN Working Group.

Regarding Claim 51, Van Lieshout in view of Toskala and further in view of TSG – RAN teaches all of the claimed limitations recited in Claim 50. Van Lieshout further teaches wherein the indicator is received and transmitted using a Radio Link Setup message from the first RNC (Section 0047).

Regarding Claim 52, Van Lieshout in view of Toskala and further in view of TSG – RAN teaches all of the claimed limitations recited in Claim 50. Van Lieshout further teaches wherein the indicator is received and transmitted using a Radio Link Reconfiguration Preparation message to the selected at least one base station (Section 0047).

Regarding Claim 53, Van Lieshout in view of Toskala and further in view of TSG – RAN teaches all of the claimed limitations recited in Claim 50. Van Lieshout further teaches receiving from the at least one selected base station which support the TFCI power control, a Radio Link Setup message including a TFCI power control support indicator; and transmitting, to the first RNC, a Radio Link Setup message including a TFCI power control support indicator (Section 0047).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S Dean whose telephone number is 571-272-7877. The examiner can normally be reached on 7:00-3:30.

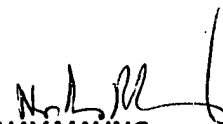
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Raymond S. Dean
May 10, 2005



NAY MAUNG
SUPERVISORY PATENT EXAMINER